

CONTENTS OF *ECOLOGICAL MODELLING*, VOL. 43

VOL. 43 NOS. 1/2

OCTOBER 1988

Special Issue

ISEM NORTH AMERICAN CHAPTER

Edited by E.J. Rykiel, Jr. and W.E. Grant

Foreword

| | |
|--|-----|
| E.J. Rykiel, Jr. and W.E. Grant (College Station, TX, U.S.A.) | 3 |
| An assessment of several of the historically most influential theoretical models used in ecology and of the data provided in their support | |
| C.A.S. Hall (Syracuse, NY and Polson, MT, U.S.A.) | 5 |
| Theory and models in ecology: a different perspective | |
| H. Caswell (Woods Hole, MA, U.S.A.) | 33 |
| On the importance of higher-level models in ecology | |
| R.E. Ulanowicz (Solomons, MD, U.S.A.) | 45 |
| Strategies and difficulties of applying models to aquatic populations and food webs | |
| D.L. DeAngelis (Oak Ridge, TN, U.S.A.) | 57 |
| Changing criteria for imposing order | |
| M. Kot (Knoxville, TN, U.S.A.), W.M. Schaffer, G.L. Truty, D.J. Graser (Tucson, AZ, U.S.A.) and L.F. Olsen (Odense, Denmark) | 75 |
| Population-dynamics theory: the roles of analytical, simulation, and supercomputer models | |
| D.W. Onstad (Champaign, IL, U.S.A.) | 111 |

Summary of Discussion

| | |
|--|-----|
| What constitutes a good model and by whose criteria? | |
| C.A.S. Hall (Syracuse, NY and Polson, MT, U.S.A.) | 125 |

Comments

| | |
|---|-----|
| Nature of ecological theories | |
| L. Fahrig (Charlottesville, VA, U.S.A.) | 129 |
| Role of models in ecology | |
| R.A. Herendeen (Champaign, IL, U.S.A.) | 133 |

Vol. 43 NOS. 3/4

NOVEMBER 1988

| | |
|---|-----|
| Temporal sensitivity of <i>Aphanizomenon flos-aquae</i> dominance – la whole-lake simulation study with input perturbations | |
| O. Varis (Espoo, Finland) | 137 |
| MINLAKE: a dynamic lake water quality simulation model | |
| M.J. Riley and H.G. Stefan (Minneapolis, MN, U.S.A.) | 155 |
| Forecasting commercial harvest of marine shrimp using a Markov chain model | |
| W.E. Grant, J.H. Matis and W. Miller (College Station, TX, U.S.A.) | 183 |

| | |
|--|-----|
| Okefenokee marshland before, during and after nutrient enrichment by a bird rookery J.D. Oliver and T. Legović (Athens, GA, U.S.A.) | 195 |
| Use of logistic regression in modelling prey selection by <i>Neomysis mercedis</i> P.A. Murtaugh (Seattle, WA, U.S.A.) | 225 |
| Effect of boundary conditions, region length, and diffusion rates on a spatially heterogeneous predator-prey system P.J. Sullivan (Seattle, WA, U.S.A.) | 235 |
| A new nonlinear model for the growth of age-structured populations living in patchy habitats M.O. Vlad (Bucharest, Romania) | 251 |
| Effect of a singular patch on population persistence in a multi-patch system H. Seno (Kyoto, Japan) | 271 |
| Bistability in the chemostat R. Kreikenbohm and E. Bohl (Konstanz, Federal Republic of Germany) | 287 |
| Temperature manipulation and the management of insecticide resistance in stored grain pests: a simulation study for the rice weevil, <i>Sitophilus oryzae</i> B.C. Longstaff (Canberra, A.C.T., Australia) | 303 |
| Book reviews | |
| Biological invasion of North America and Hawaii | 315 |
| Fruit fly management | 317 |
| Author Index | 321 |

